

**REMARKS**

Applicants thank the Examiner for the thorough examination given the present application.

**Status of the Claims**

Claims 1 and 3 will be pending in the above-identified application upon entry of the present amendment. Claim 1 has been amended by incorporating the subject matter of claim 2. As such, claim 2 has been cancelled. Claim 3 has been amended to remove its dependency from claim 2. Thus, no new matter has been added by way of the above amendments.

Applicants submit that the present Amendment is merely formal in nature, presents no new issues since claim 1 merely incorporates the subject matter from previously examined dependent claim 2, reduces the number of issues under consideration, and places the case in condition for allowance. Alternatively, entry of the present amendment is proper to place the claims in better form for appeal.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

**Issues under 35 U.S.C. § 112, second paragraph**

The Examiner has maintained the rejection of claims 1-3 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, claims 1-3 are allegedly vague and indefinite for failing to recite a biologically pure microorganism because it is unclear that the microorganism as claimed has been purified by the hand of man. Applicants respectfully traverse.

The scope of the claim is definite regardless of whether the term “isolated” is by the “hand of man” or not by the “hand of man.” Although this phrase may arguably be broad, it is not indefinite.

Applicants respectfully submit that the second paragraph of 35 USC § 112, requires that the claims particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Nowhere within the statute is there an explicit recitation that the scope of the claim, whether it is broad or narrow, adversely effects the distinctness of the claimed subject matter. Furthermore, the MPEP states:

Breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph. (see MPEP 2173.04).

As such, Applicants respectfully submit that the rejection of the phrase “isolated” under 35 U.S.C. § 112, second paragraph is improper.

#### **Issues under 35 U.S.C. § 102(b)**

The Examiner has maintained the rejection of claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by Korean Patent Abstract 1020010089980 (hereinafter referred to as “KR ‘980”). Applicants respectfully traverse this rejection. Reconsideration and withdrawal of this rejection are respectfully requested based on the following considerations.

#### **Legal Standard for Determining Anticipation**

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.” *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001). “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis*

*verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

*Distinctions over the Cited Reference*

The Examiner continues to assert that the mutant strain of KR '980 is identical and will inherently have resistance to 5-fluorotryptophan. To support an anticipation rejection based on inherency, the Examiner must provide factual and technical grounds establishing that the inherent feature *necessarily* flows from the teachings of the prior art. The inherency *must* flow as a necessary conclusion from the prior art and cannot be simply a possible one. In other words, for the Examiner to be correct, the exemplified embodiments of KR '980 must have all the allegedly inherent features. Applicants respectfully submit that the inherent feature does not necessarily flow from the teachings of KR '980 and that the exemplified embodiments of KR '980 do not have all the allegedly inherent features.

Basically, *Corynebacterium ammoniagenes* can produce 5'-xanthyllic acid, and both the microorganism SaO.4-23 of KR '980 and the microorganism CJXFT 0301 of the present invention are a mutant strain of *Corynebacterium ammoniagenes*, which can produce 5'-xanthyllic acid with more productivity.

However, the microorganism SaO.4-23 of KR '980 and the microorganism CJXFT 0301 of the present invention are different in mechanism for increasing productivity of 5'-xanthyllic acid.

That is, the microorganism SaO.4-23 of KR '980 has a resistance to sodium azide and a reinforced electron transport system. The microorganism of KR '980 also has an increased resistance to high concentrations of 5'-xanthyllic acid and saccharide, thereby having improved productivity of 5'-xanthyllic acid (abstract). The improved productivity is due to the microorganism of KR '980 being selected from mutant strains which can grow in a culture medium having different concentration levels of sodium azide therein (abstract).

However, the microorganism CJXFT 0301 of the present invention has a resistance to 5-fluorotryptophan and thus enhances biosynthesis of N5,N10-tetrahydrofolate used for transferring two formyl groups during the process of purine biosynthesis. The microorganism of

the present invention accumulates 5'-xanthyllic acid in a culture medium at a high yield and high concentration rate for the same period of fermentation since it is selected from mutant strains which can grow in a culture medium having different concentration levels of 5-fluorotryptophan therein.

Accordingly, the present invention is not anticipated by KR '980 since the reference does not teach or provide for each of the limitations recited in the pending claims.

For completeness, Applicants also respectfully submit that KR '980 does not render the present invention obvious because neither the reference nor the knowledge in the art provides any disclosure, reason, or rationale that would allow one of ordinary skill in the art to arrive at the present invention as claimed.

### **CONCLUSION**

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance clearly indicating that each of pending claims 1 and 3 are allowed and patentable under the provisions of Title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad M. Rink, Reg. No. 58,258 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By \_\_\_\_\_

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